A most significant point in this connection is the fact that, immediately following his *Teucrium canadense* "*Foliis gaudet angustioribus . . . rugosis*," Linnaeus had a second species, *T. virginicum* "foliis ovatis," based on another of Clayton's specimens which Linnaeus had personally studied. This type of *T. virginicum* could not be found by Underwood but Bicknell's conclusion seems justified, that the description "allows scarcely a doubt" that it was the inland plant interpreted by Bicknell as *T. canadense*. Linnaeus would hardly have distinguished as two species (1) *T. canadense*, "*Foliis . . . angustioribus . . . rugosis*" from Canada, where the narrow- and rugose-leaved plant is well known and where the ovate-leaved plant is unknown, and (2) *T. virginicum* "foliis ovatis," if his *T. canadense* had had the leaves ovate. It is reasonably clear, then, that

TEUCRIUM CANADENSE L. Sp. Pl. ii. 564 (1753), as to plant described (supported by the type in the Linnean Herbarium) and as to the Gronovian plant (preserved in the Clayton Herbarium at the British Museum) is *T. littorale* Bicknell, Bull. Torr. Bot. Cl. xxviii. 169 (1901). *T. canadense*, var. *littorale* (Bickn.) Fernald, RHODORA, xxiii. 289 (1922).

The more southern and inland plant is

T. CANADENSE L., var. VIRGINICUM (L.) Eaton, Man. Bot. ed. 5: 415 (1829); Wood, Class-Bk. 285 (1845); Farwell, Papers Mich. Acad. Sci. i. 97 (1923). *T. virginicum* L. Sp. Pl. ii. 564 (1753). *T. canadense* Bicknell, Bull. Torr. Bot. Cl. xxviii. 168 (1901), not L. (1753).

RECENT DISCOVERIES IN THE NEWFOUNDLAND FLORA

M. L. FERNALD

(Concluded from page 386)

ADDITIONAL NOTES

WHILE the preceding eleven instalments have been in the course of publication my attention has been called to necessary changes in nomenclature. Such as have come to attention follow, although it will doubtless be found that some earlier homonyms besides those already detected will necessitate further change. That is the inevitable result of the adoption of the "homonym rule" without any safeguarding.

CAREX INCURVA Lightf. On pages 56, 60 and 216 I made notes on *C. incurva* Lightf. (1777) and its var. *setina* Christ (1888), publishing a map (MAP 4) of the range and a photograph (PLATE 247, FIG. 1) of the latter. Most unfortunately, however, strict priority in nomenclature forces us to abandon the perfectly familiar name *C. incurva* for a characteristic and notable species of bipolar distribution and to take up for it a name, *C. maritima,* which has been equally familiar as the apellation of one of the most definite species of a wholly different section of the genus.

Carex maritima Gunner, Fl. Norveg. ii. 131 (1772), not *C. maritima* O. F. Muell., Fl. Dan. iv. fasc. xii. 6, t. dcciii (1777), was briefly but clearly diagnosed and based on an earlier diagnosis and excellent analytical plate:

> CAREX (*maritima*) spica unica, subrotunda; glumis ovatis, brevissime aristatis. *Hall.* 1354? *Oed. dan.* VIII.
>
> Norv. *Fjaerestar.* Habitat in arena littorea norv. Oeder.

C. maritima Gunner, was, therefore, established chiefly on the species described, without binomial, and well illustrated by Oeder in Flora Danica, iii. fasc. viii. (pl. ccccxxxii):

> *Carex spica unica subrotunda, glumis ovatis, brevissime aristatis.* Hall. 1354?
>
> Locus. In arenosis maritimis Norvegiae.

Both Oeder and, after him, Gunner, thought that the seashore plant of Norway might be species no. 1354 of Haller, but both expressed doubt on that point. *C. maritima* Gunner must, therefore, rest upon the Norwegian plant actually illustrated. This is without question the later-described *C. incurva* Lightf.

The detection of the priority of *Carex maritima* Gunner (1772), a name not caught either in *Index Kewensis* or by Kükenthal, over *C. incurva* Lightf. (1777) and over the wholly different *C. maritima* O. F. Muell. (1777) was made by Kreczetowicz, who, in a study of *Carex incurva sensu Kuekenthal,*[1] correctly takes up *C. maritima* for *C. incurva* but, less correctly, it seems to me, splits *C. incurva,* upon characters which are not satisfactorily constant in the material before me, into several proposed species: *C. transmarina* V. Krecz. for the plant of Greenland, *C. orthocaula* V. Krecz. for that of the Bering sea area, *C. jucunda* V. Krecz. for that of Newfoundland, etc. *C. setina* (Christ) V. Krecz. is set up for the dwarf *C. incurva,* var. *setina* Christ; and Simmons's ecological state of *C. incurva,* with culms showing the inflation so frequent in submersed individuals of many species, *C. incurva* var. *inflata* Simmons, appears as a new species, *C.*

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[1] V. Krecz. Bull. Jard. Bot. del'Acad. Sci. deL'Urss. xxx. 119–138 (1932).

psychroluta V. Krecz., without a single specific character stated and only the description of Simmons directly quoted: "rhizoma longum inter muscos in aqua libera natans, culmus erectus valde inflatus, spica subglobosa."

Although I find myself unable to follow Kreczetowicz in his oversplitting of *Carex maritima* and his specific segregation from the northern European plant of the material from Greenland, Newfoundland and other North American areas, there are some well-defined geographic varieties which, unfortunately, have to be called

CAREX MARITIMA Gunner, var. **setina** (Christ), comb. nov. *C. incurva*, var. *setina* Christ in Scheutz, Pl. Vasc. Jeniseens. 174 (1888)—Kongl. Svensk. Vet.-Akad. Handl. xxii. no. 10: 174 (1888). *C. setina* (Christ) V. Krecz. Bull. Jard. Bot. de l'Acad. Sci. de L'Urss, xxx. 136 (1932).

C. MARITIMA, var. **melanocystis** (Desv.), comb. nov. *C. melanocystis* Desv. in Gay, Hist. Bot. Chile, vi. 203, t. 73, fig. 5 (1853). *C. incurva*, var. *melanocystis* (Desv.) Kükenth. in Engler, Pflanzenr. iv.^{20} 114 (1909).

C. MARITIMA, var. **misera** (Phil.), comb. nov. *C. misera* Phil. Florul. Atacam. 388 (1860). *C. melanocystis*, var. *misera* (Phil.) Kükenth. in Engler, Bot. Jahrb. xxvii. 499 (1899). *C. incurva*, var. *misera* (Phil.) Kükenth. in Engler, Pflanzenr. iv.^{20} 114 (1909).

The coarse maritime species with spreading or pendulous pistillate spikes with very prolonged scales, *Carex maritima* O. F. Muell. Fl. Dan. iv. fasc. xii. 6, t. dcciii (1777), not Gunn. Fl. Norv. ii. 131 (1772), must, apparently, be called C. PALEACEA Wahlenb. Vet.-Akad. Nya Handl. Stockh. xxiv. 164 (1803). The plant of Scandinavia and Russia, typical *C. paleacea*, is comparatively low, with culms 1–5 dm. high ("20–50 cm. altus"—*Kükenthal;* "3–5"—*Lindmann;* but, as shown in the Gray Herbarium, sometimes only 1 dm. high); the American plant is more variable, ranging from 0.2–1 m. high. The leaves of European *C. paleacea* are accurately described by Kükenthal as "4–8 mm. lata"; but those of the larger American specimens are often 10–12 mm. broad. The European plant has the pistillate spikes "2–5 cm. longae" (*Kükenthal*); but in ours the length is 2–7 cm. In typical European *C. paleacea* the perigynium has a minute beak, barely 0.2 mm. long; the beak in the American series is distinctly longer, 0.3–0.5 mm. long. The plant of eastern America is, therefore, a well defined geographic variety which I am calling

CAREX PALEACEA Wahlenb., var. **transatlantica**, var. nov., culmis 0.2–1 m. altis; foliis 0.5–1.2 cm. latis; spicis femineis 2–7 cm. longis;

perigyniis valde rostratis, rostro 0.3–0.5 mm. longo.—Coast of Labrador to Massachusetts; shores of James Bay. TYPE: meadows and swamps in the slaty region, south and east of Bic, Quebec, July 17, 1907, *Fernald & Collins*, no. 930 (in Gray Herb.).

Carex maritima, var. *erectiuscula* Fern. RHODORA, ii. 170 (1900) seems to be a hybrid of *C. paleacea*, var. *transatlantica* and *C. salina*, var. *kattegatensis*. A plant of the shores of the White Sea in Russian Lapland seems well distinguished from typical *C. paleacea* by its browner and erect spikes. This is

C. PALEACEA, var. **brunnescens** (F. Nylander), comb. nov. *C. maritima*, var. *brunnescens* F. Nylander, Spic. Fl. Fenn. ii. 20 (1844).

CAREX VAHLII Schkuhr, var. **inferalpina** (Wahlenb.), comb. nov. *C. alpina*, var. *inferalpina* Wahlenb., Fl. Lapp. 241 (1812); Fernald, RHODORA, xxxv. 223, t. 248, figs. 3, 4, 8 and 9 (1933). *C. angarae* Steud. Syn. Cyp. 190 (1855). *C. alpina*, forma *inferalpina* (Wahlenb.) Kükenthal in Engler, Pflanzenr. iv.^{20} 386 (1909).

C. VAHLII, var. **Stevenii** (Holm.), comb. nov. *C. alpina*, var. *Stevenii* Holm, Am. Journ. Sci. ser. 4, xvi. 21, 27 (1903); Fernald, l. c., figs. 5 and 10 (1933).

Unfortunately *Carex alpina* Swartz (1798), which I used in the earlier part of this paper, is invalidated, as Mr. Mackenzie points out to me, by the earlier *C. alpina* Schrank (1789) and another, *C. alpina* Honck. (1792). So far as I can yet determine, the earliest available specific name for our plant is *C. Vahlii* Schkuhr, Riedgr. i. 87, t. Gg. no. 94 (1801).

HABENARIA ORBICULATA (Pursh) Goldie.

The reference to *Habernaria orbiculata* (Pursh) Torr. on p. 240 should read *H. orbiculata* (Pursh) Goldie. The species rests nomenclaturally entirely on *Orchis orbiculata* Pursh. In publishing *H. macrophylla* Goldie, Edinb. Phil. Journ. vi. 331 (1822), its author made the transfer of *Orchis orbiculata* to *Habenaria*, saying of his new *H. macrophylla* "It must rank next to *Habenaria orbiculata* (*Orchis* of Pursh and Nuttall), having, like it, two plane, orbicular, approaching to elliptical, *leaves*, ... and which, in this plant, are four times as large as those of *H. orbiculata*." Even though one may read into this comparison of the leaf-size the influence of Hooker's misidentification of *Orchis orbiculata* Pursh,[1] yet from a purely nomenclatural standpoint *H. orbiculata* rests alone upon the Pursh species, which is the plant we have recently been correctly calling by that name: "In the herbarium at Kew there is a specimen of *Habenaria*

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[1] See Ames, RHODORA, viii. 2 (1906).

orbiculata which appears to be the type. On the reverse of the sheet on which it is mounted, in the upper left-hand corner, the name 'Fred Pursh' is written. Presumably, this specimen was obtained by Hooker when the Lambert collection was sold, as Lambert possessed Pursh's herbarium."[1]

EUPHRASIA STRICTA Host (see p. 306). Professor Wiegand kindly calls my attention to the fact that *E. stricta* Host, Fl. Austr. ii. 185 (1831) in antedated by *E. stricta* HBK. Nov. Gen. et Sp. ii. 333 (1818). The removal of the latter species long since from *Euphrasia*, made *E. stricta* Host available and valid under the International Rules until they were fundamentally (and, I believe, unwisely) altered in 1930. Under the present dispensation our plant should probably be called E. RIGIDULA Jord. Pug. Pl. Nov. 134 (1852).

EXPLANATION OF PLATES 232–273.

PLATES 232–238. Sufficiently explained in the legends.

PLATE 239. NANISM AT SEALEVEL IN WESTERN NEWFOUNDLAND: FIG. 1, SOLIDAGO MACROPHYLLA Pursh, var. THYRSOIDEA (E. Meyer) Fern., from Bard Harbor Hill, *Fernald et al.*, no. 29,103; FIG. 2, SENECIO PAUPERCULUS Michx., var. FIRMIFOLIUS Greenm., from Sandy (or Poverty) Cove, *Fernald, Long & Dunbar*, no. 27,164; FIG. 3, SAXIFRAGA OPPOSITIFOLIA L., from Flower Cove, *M. E. Priest;* FIG. 4, SAXIFRAGA CESPITOSA L., from Plum Point, Brig Bay, *Fernald, Long & Dunbar*, no. 26,743; FIG. 5, DRABA INCANA L., var. CONFUSA (Ehrh.) Poir., from Burnt Cape, *Fernald et al.*, no. 28,350; all × 1.

PLATE 240. NANISM AT SEALEVEL IN WESTERN NEWFOUNDLAND: FIG. 1, POTENTILLA FRUTICOSA L., from Port au Port Bay, *Fernald & Wiegand*, no. 3579; FIG. 2, POTENTILLA NIVEA L., var. MACROPHYLLA Ser., from St. John Island, *Fernald et al.*, no. 28,527; FIG. 3, LESQUERELLA PURSHII (Wats.) Fern., from Old Port au Choix, *Fernald, Long & Fogg*, no. 1724; FIG. 4, PLANTAGO JUNCOIDES Lam., var. GLAUCA (Hornem.) Fern., from St. John Island, *Fernald et al.*, no. 29,058; FIG. 5, POA ALPINA L., var. BREVIFOLIA Gaudin, from Savage Cove, *Fernald, Pease & Long*, no. 27,394; all × 1.

PLATE 241. MUHLENBERGIA UNIFLORA (Muhl.) Fern., var. TERRAE-NOVAE Fern.: FIG. 1, habit, × 1, from Grandy Brook, Newfoundland, *Fernald, Long & Fogg*, no. 101; FIG. 2, spikelet from no. 101, × 10. FESTUCA PROLIFERA (Piper) Fern., var. LASIOLEPIS Fern.: FIG. 3, plant, × 1, from TYPE collection, Stanleyville, Newfoundland, *Fernald, Long & Fogg*, no. 1236; FIG. 4, spikelet from TYPE, × 4.

PLATE 242. CATABROSA AQUATICA (L.) Beauv.: FIG. 1, panicle, × 1, from Lund, Sweden, *Nilsson;* FIG. 2. summit of culm, × 6. C. AQUATICA, var. LAURENTIANA Fern.: FIG. 3, panicle, × 1, from Southport, Prince Edward Island, *Fernald & St. John*, no. 6881; FIG. 4, summit of culm, × 6, from Port aux Basques, Newfoundland, *Fernald, Long & Dunbar*, no. 26,285. C. AQUATICA, var. UNIFLORA S. F. Gray: FIG. 5, panicle, × 1, from Valais, Switzerland, *Joad;* FIG. 6, summit of culm, × 6, from Upsala, Sweden, *Ahlberg;* FIG. 7, panicle, × 1, from Henry Lake, Fremont Co., Idaho, *Payson & Payson*, no. 2017; FIG. 8, summit of culm, × 6, from no. 2017.

PLATE 243. AGROPYRON TRACHYCAULUM (Link) Steud.: FIG. 1, inflorescence, × 1, from Fort Garland, Colorado, 1884, *Vasey*, TYPE collection of *A. tenerum* Vasey; FIG. 2, inflorescence, × 1, from Mt. Ste. Anne, Percé, Quebec, *Collins*

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[1] Ames, orchidaceae, iv. 144 (1910).

& Fernald, no. 36; FIG. 3, internode of rachilla, × 10, from Rivière à Pierre, Quebec, *Fernald & Smith*, no. 25,465. A. TRACHYCAULUM, var. MAJUS (Vasey) Fern.: FIG. 4, mature (contracted) inflorescence, × 1, from Kearney, Nebraska, *Shear*, no. 272, TOPOTYPE of *A. pseudorepens* Scribn. & Smith; FIG. 5, young inflorescence, × 1, from Little River, Newfoundland, *Mackenzie & Griscom*, no. 11,178; FIG. 6, internodes of rachilla, × 10, from Grand Falls, Newfoundland, *Fernald & Wiegand*, no. 4686. A. TRACHYCAULUM, var. NOVAE-ANGLIAE (Scribn.) Fern.: FIG. 7, young inflorescence, × 1, from the type region, Willoughby Mt., Vermont, *E. F. Williams;* FIG. 8, ripe (contracted) inflorescence, × 1, from Newbury, Massachusetts, *A. A. Eaton;* FIG. 9, internodes of rachilla, × 10, from Willoughby, Vermont, *Eggleston*, no. 2177.

PLATE 244. AGROPYRON TRACHYCAULUM (Link) Steud., var. GLAUCUM (Pease & Moore) Malte: FIG. 1, inflorescence, × 1, from Kelly Point, Pembroke, Maine, *Fernald*, no. 1367, TYPE of the variety; FIG. 2, inflorescence, × 1, from Comox, Vancouver Island, British Columbia, *Malte*, no. 107,855, TYPE of var. *caerulescens* Malte; FIG. 3, inflorescence, × 1, from Victoria, British Columbia, *Malte*, no. 108,309, TYPE of var. *pilosiglume* Malte; FIG. 4, internode of rachilla and base of lemma, × 10, from TYPE. A. TRACHYCAULUM, var. UNILATERALE (Cassidy) Malte: FIG. 5, inflorescence, × 1, from Rivière au Saumon, Anticosti I., Quebec, *Victorin & Rolland*, no. 27,886; FIG. 6, inflorescence, × 1, from Dry Fork of Belt Creek, Montana, *Rydberg*, no. 3352; FIG. 7, internode of rachilla and base of lemma, × 10, from *Victorin & Rolland*, no. 27,886.

PLATE 245. Inflorescences, × 1, of, FIG. 1, AGROPYRON REPENS (L.) Beauv., from Sandy Bay, Quebec, *Fernald & Collins*, no. 385; FIG. 2, A. REPENS, forma ARISTATUM (Schum.) Holmb., from Manchester, Maine, *Scribner*, no. 22; FIG. 3, A. REPENS, var. SUBULATUM (Schreb.) Reichenb., from Shediac Cape, New Brunswick, *Hubbard*, no. 707; FIG. 4, var. SUBULATUM, forma VAILLANTIANUM (Wulf. & Schreb.) Fern., from Jamaica Plain, Massachusetts, *Faxon;* FIG. 5, A. PUNGENS (Pers.) R. & S., from Harwich, Massachusetts, *Fernald*, no. 16,251.

PLATE 246. AGROSTIS SCABRA Willd., var. SEPTENTRIONALIS Fern.: FIG. 1, portion of panicle, × 1, from Main River, Bonne Bay, Newfoundland, *Fernald & Long*, no. 1306; FIG. 2, mature spikelets, × 6, from no. 1306. A. HYEMALIS (Walt.) BSP. (*A. antecedens* Bickn.): FIG. 3, young panicle, × 1, from Telford, Pennsylvania, *Benner;* FIG. 4, expanded panicle, × 1, from Jamaica, Long Island, New York, *Bicknell;* FIG. 5, mature spikelets, × 6, from Wady Petra, Illinois, *V. H. Chase* in Kneucker, Gram. Exsicc. no. 569.

PLATE 247. Fig. 1, CAREX MARITIMA Gunn., var. SETINA (Christ) Fern. (*C. incurva* Lightf., var. *setina* Christ), × 1, from Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 1373. Fig. 2, C. LANGEANA Fern., × 1, from Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 1374.

PLATE 248. CAREX VAHLII Schkuhr (*C. alpina* Sw.): FIG. 1, inflorescence, × 3, from the Engadine, Graubünden, Switzerland, *Zahn*, no. 17; FIG. 6, perigynium of no. 17, × 6; FIG. 2, inflorescence, × 3, from Anse aux Sauvages, Newfoundland, *Fernald, Wiegand & Long*, no. 27,699; FIG. 7, perigynium of same, × 6. C. VAHLII, var. INFERALPINA (Wahlenb.) Fern.: FIG. 3, inflorescence, × 3, from Austria, *Arnell;* FIG. 8, perigynium, of same, × 6; FIG. 4, inflorescence, × 3, from North Fork of Madeleine River, Quebec, *Fernald, Dodge & Smith*, no. 25,549; FIG. 9, perigynium of same, × 6. C. VAHLII, var. STEVENII (Holm) Fern.: FIG. 5, inflorescence, × 3, from Estes Park, Colorado, *Hunnewell;* FIG. 10, perigynium of same, × 6. C. VESICARIA L., var. LAURENTIANA Fern.: FIG. 11, inflorescence, × 1, from Chevalier, Saguenay Co., Quebec, *St. John*, no. 90,279; FIG. 12, inflorescence, × 1, from the TYPE, Doctor Hill, Newfoundland, *Fernald, Long & Fogg*, no. 1474.

PLATE 249. JUNCUS TRIGLUMIS L.: FIG. 1, habit, × 1, from Vajoletthal, Tyrol, *A. S. Pease*, no. 13,386; FIG. 2, fruiting glomerule, × 6, from near Katon-Karagai, Prov. Semiplatinsk, western Siberia, July 29, 1928, *Krylov & Sergievskaja;* FIG. 3, seeds, × 12, from Val de Fain, Haut Engadin, Switzerland, August 10, 1868, *Shuttleworth*. J. ALBESCENS (Lange) Fern.: FIG. 4, habit, × 1, from St. John Island, St. John Bay, Newfoundland, *Fernald, Wiegand, Long, Gilbert & Hotchkiss*, no. 27,787; FIG. 5, fruiting glomerule, × 6, from Capstan Point, Flower Cove, Newfoundland, *Fernald, Long & Dunbar*, no. 26,492; FIG. 6, seeds, × 12, from Rock Marsh, Flower Cove, Newfoundland, *Fernald, Long & Dunbar*, no. 26,494.

PLATE 250. CYPRIPEDIUM PARVIFLORUM Salisb., var. PLANIPETALUM Fern.: FIG. 1, large plant, × 1, from Old Port au Choix, Newfoundland, *Fernald, Long & Fogg*, no. 1533; FIG. 2, small plant, × 1, from TYPE collection, Savage Cove, Newfoundland, *Fernald & Long*, no. 27,851.

PLATE 251. HABENARIA STRAMINEA Fern.: FIG. 1, habit, × 1, from Pointe Riche, Newfoundland, *Fernald, Long & Fogg*, no. 1543; FIG. 2, flowers, × 6, from Burnt Cape, Pistolet Bay, Newfoundland, *Fernald, Wiegand, Pease, Long, Griscom, Gilbert & Hotchkiss*, no. 27,889. H. ALBIDA (L.) R. Br.; FIG. 3, flowers, × 6, from Glen Lochay, Killin, Tayside, Perthshire, Scotland, June 25, 1927, *Frank Morris*.

PLATE 252. HABENARIA HOOKERI Torr., var. ABBREVIATA Fern.: habit, × 1, from TYPE collection, Eastern Point, St. John Bay, Newfoundland, *Fernald, Long & Fogg*, no. 1553; flower, × 2, from TYPE (upper insert). H. HOOKERI: flower, × 2, from Wallingford, Vermont, *Kennedy*.

PLATE 253. MALAXIS BRACHYPODA (Gray) Fern.: FIG. 1, habit, × 1, from Rock Marsh, Flower Cove, Newfoundland, *Fernald, Pease & Long*, no. 27,927; FIG. 2, flowers, showing drooping lip, × 4, from the type region, Cedar Lake, Herkimer Co., New York, *J. V. Haberer*, no. 893; FIG. 3, fruit, showing reflexed perianth, × 4, from Mars Hill, Maine, September 8, 1896, *Fernald;* FIG. 4, buds, just before expansion, × 4, from Rivière aux Marsouins, Quebec, *Fernald & Weatherby*, no. 2429. M. MONOPHYLLOS (L.) Sw.: FIG. 5, flowers, showing erect lip, × 4, from Kloster-Schwaderloch, Switzerland, *Zoja* in *Braun-Blanquet*, Fl. Raet. Exsicc., no. 123; FIG. 6, fruit, with shriveled perianth projected forward, × 4, from St. Petersburg, Russia, *Herb. Fl. Ingricae*, no. 627; buds, just before expansion, × 4, from Graswangthal, Bavaria, *F. Schultz*, Herb. Norm., no. 950.

PLATE 254. SALIX WIEGANDII Fern., × 1: FIG. 1, mature branchlet, from Pointe Riche, Newfoundland, *Fernald, Long & Fogg*, no. 1605; FIGS. 2 and 3, flowering (pistillate) branchlets from the TYPE collection, Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 1602.

PLATE 255. ARENARIA MARCESCENS Fern.: FIG. 1, fragments, in flower, × 1, from Mt. Albert, Quebec, *Fernald, Griscom, Mackenzie & Smith*, no. 25,725; FIG. 2, fragment, in fruit, × 1, from the TYPE, Blomidon, Newfoundland, *Fernald & Wiegand*, no. 3365; FIG. 3, seeds, × 10, from the TYPE, no. 3365.

PLATE 256. ARENARIA NORVEGICA Gunn.: FIG. 1, entire plant, × 1, from Lake Torneträsk, Torne Lappmark, *Alm*, Intern. Phytogeogr. Exc., no. 3897: FIG. 2, seeds, × 10, from Hjerkinn, Norway, *A. S. Pease*, no. 20,773. A. CYLINDROCARPA Fern.: FIG. 3, fragments in young fruit, × 1, from The Tableland, Bonne Bay, Newfoundland, *Fernald, Long & Fogg*, no. 1675; FIG. 4, flower, to show expanded calyx, × 6, from Mt. Albert, Quebec, *Fernald, Griscom, Mackenzie & Smith*, no. 25,730; FIG. 5, mature capsule and calyx, × 6, from St. John Island, Newfoundland, *Fernald, Wiegand, Long, Gilbert & Hotchkiss*, no. 28,180; FIG. 6, seeds, × 10, from no. 28,180.

PLATE 257. CERASTIUM TERRAE-NOVAE Fern. & Wieg.: FIG. 1, small plants, × 1, from The Tableland, Bonne Bay, Newfoundland, *Fernald, Long & Fogg*, no. 1685; FIG. 2, seeds, showing one with ruptured testa, × 10, from the TYPE, Blomidon, Newfoundland, *Fernald & Wiegand*, no. 3390.

PLATE 258. LESQUERELLA ARCTICA (Wormsk.) Wats.: FIG. 1, small plant, × 1, from Sewell Harbor, lat. 78° 30′, western Greenland, *Ralph Robinson*, no. 38; FIG. 2, fruit, × 1, from Nûgssuaq Halvø, Pâtût, lat. 70° 15′, western Greenland, July 3, 1929, *M. P. & R. T. Porsild;* FIG. 3, flower (shriveled), showing lance-acuminate sepals, × 4, from Ritenbenks Kulbrud, lat. 70° 3′, Disco, Greenland, June 4, 1924, *A. E. Porsild*. L. PURSHII (Wats.) Fern.:

FIG. 4, small plant, × 1, from Big Brook, Straits of Belle Isle, Newfoundland, *Long & Gilbert*, no. 28,335; FIG. 5, fruit, × 1, from Green Gardens, Cape St. George, Newfoundland, *Mackenzie & Griscom*, no. 11,016; FIG. 6, flower, showing oblong, obtuse sepals, × 4, from Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 1725.

PLATE 259. EPILOBIUM PYLAIEANUM Fern.: FIGS. 1, 2 and 3, fruiting and flowering plants, × 1, from Burgeo, Newfoundland, *Fernald, Long & Fogg*, no. 332; FIG. 4, flower, showing oblong, obtuse calyx-lobes, × 6, from no. 332; FIG. 5, seed, showing slender beak, × 10, from the TYPE, Port aux Basques, Newfoundland, *Fernald, Long & Dunbar*, no. 26,865.

PLATE 260. VACCINIUM NUBIGENUM Fern.: flowering branch, × 1, from Deep Gulch, Doctor Hill, Newfoundland, *Fernald, Long & Fogg*, no. 1936; FIG. 2, margin of leaf, × 4, from no. 1936; FIG. 3, flower, × 4, from no. 1936; FIG. 4, anthers, × 8, from no. 1936. V. CESPITOSUM Michx.: anthers, × 8, from Flower Cove, Newfoundland, *Pease, Long & Gilbert*, no. 28,868. V. OVALIFOLIUM Sm.: anthers, × 8, from Mt. Hood, Oregon, *Henderson*, no. 744.

PLATE 261. ASTER TRADESCANTI L., × ⅔: type of species in Clifford Herbarium, British Museum, with designation of Asa Gray, "vera" (photographed by *M. L. Fernald*, September, 1903).

PLATE 262. ASTER TRADESCANTI L., × ½: upper three-fourths of sheet from Sandy Cove, Digby Co., Nova Scotia, *Fernald & Long*, no. 22,762, identified (correctly) by Wiegand as *A. saxatilis* (Fern.) Blanchard.

PLATE 263. ANTENNARIA COLUMNARIS Fern., × 1, from the TYPE collection, Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 2076; insert, × 2, to show tips of crowded cauline leaves.

PLATE 264. ANTENNARIA FOGGII Fern., × 1, from TYPE collection, Old Port au Choix, Newfoundland, *Fernald, Long & Fogg*, no. 2100; insert, × 2, to display leaf-tips and coherent bracts.

PLATE 265. ANTENNARIA BAYARDI Fern., × 1, from TYPE collection, Tucker's Head, Bonne Bay, Newfoundland, *Fernald, Long & Fogg*, no. 2097; insert, × 2, to show leaf-tips and loose bracts.

PLATE 266. ANTENNARIA BRUNNESCENS Fern., × 1, from TYPE collection, alt. 650 m., Killdevil, Bonne Bay, Newfoundland, *Fernald, Long & Fogg*, no. 2105; insert, × 2, to show leaf-tips and broad bracts.

PLATE 267. ANTENNARIA CANA (Fern. & Wieg.) Fern., × 1, plant at left from type station of species, Pointe Riche, Newfoundland, *Fernald, Long & Fogg*, no. 2087; plant at right from TYPE collection of *A. Longii* Fern., Schooner (or Brandy) Island, Pistolet Bay, Newfoundland, *Pease & Long*, no. 29,177; inserts, × 2, from collections shown below, to display leaf-tips and loose involucres.

PLATE 268. ANTENNARIA CONFUSA Fern. (left), × 1, from TYPE collection, Old Port au Choix, Newfoundland, *Fernald, Long & Fogg*, no. 2078; insert × 2. A. GASPENSIS Fern. (right), × 1, from Penguin Head, Bay of Islands, Newfoundland, *Fernald, Long & Fogg*, no. 2107; insert, × 2.

PLATE 269. ARNICA CHIONOPAPPA Fern.: FIG. 1, small plant, to show characteristic 3-nerved basal leaves, × 1, from Eastern Point, St. John Bay, Newfoundland, *Fernald, Long & Fogg*, no. 2136; FIG. 2, achene and disk-corolla, × 6, from Shag Cliff, Bonne Bay, Newfoundland, *Fernald, Long & Fogg*, no. 2137. A. TOMENTOSA J. M. Macoun: FIGS. 3 and 4, small plants, × 1, from Old Port au Choix, Newfoundland, *Fernald, Long & Fogg*, no. 2127; FIG. 5, achene and disk-corolla, × 6, from no. 2127.

PLATE 270. ARNICA LOUISEANA Farr: FIG. 1, small plant, × 1, from Eastern Point, St. John Bay, Newfoundland, *Fernald, Long & Fogg*, no. 2140; FIG. 2, achene and disk-corolla, × 6, from Pointe Riche, Newfoundland, *Fernald, Long & Fogg*, no. 2143. A. TERRAE-NOVAE Fern.: FIG. 3, small plants, × 1, from Eastern Point, St. John Bay, Newfoundland, *Fernald, Long & Fogg*, no. 2124; FIG. 4, achene and disk-corolla, × 6, from Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 2126.

PLATE 271. TARAXACUM CERATOPHORUM (Led.) DC.: FIGS. 1 and 2, small plant and individual head, to show characteristic involucre, × 1, from Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 7172; FIG. 3, achene with beak and pappus, × 1, from no. 7172; FIG. 4, achene, × 10, from no. 7172. T. AMBIGENS Fern.: FIG. 5, small leaf, × 1, from the TYPE, Port au Choix, *Fernald, Long & Fogg*, no. 2167; FIG. 6, head, with characteristic reflexing outer bracts, × 1, from the TYPE; FIG. 7, achene with beak and pappus, × 1, from the TYPE; FIG. 8, achene, × 10, from the TYPE. T. AMBIGENS, var. FULTIUS Fern.: FIG. 9, head, showing appressed outer involucre, × 1, from the TYPE, Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 2163. T. LAPPONICUM Kihlm.: FIG. 10, characteristic achene, × 10, from Sandy (Poverty) Cove, Straits of Belle Isle, Newfoundland, *Fernald, Long & Dunbar*, no. 27,174.

PLATE 272. TARAXACUM PHYMATOCARPUM Vahl.: FIG. 1, plant, × 1, from Sewall Harbor, lat. 78° 30′, western Greenland, *Ralph Robinson*, no. 40; FIG. 2, achene (dark) with characteristic short beak, × 1, from Netiuleme, Whale Sound, Greenland, *Wetherell*, no. 175, in part; FIG. 3, achene, × 10, from no. 175. T. LYRATUM (Led.) DC.: FIG. 4, achene, × 10, from high alpine region, Colorado, *Hall & Harbour*. T. LAURENTIANUM Fern.: FIG. 5, leaf, × 1, from the TYPE, base of Ha-Ha Mountain, Ha-Ha Bay, Newfoundland, *Fernald, Wiegand, Long, Gilbert & Hotchkiss*, no. 29,245; FIGS. 6 and 7, heads, showing characteristic involucre, × 1, from the TYPE; FIG. 8, achene, with the long beak and long pappus, × 1, from the TYPE; FIG. 9, achene, × 10, from the TYPE. T. DUMETORUM Greene: FIG. 10, achene, × 10, from Medicine Hat, Alberta, June 8, 1894, *John Macoun*.

PLATE 273. TARAXACUM LONGII Fern.: FIG. 1, leaf, × 1, from Grand River, Gaspé Co., Quebec, June 30–July 3, 1904, *Fernald;* FIG. 2, head, showing characteristic involucre, × 1, from the TYPE, base of Ha-Ha Mountain, Ha-Ha Bay, Newfoundland, *Fernald, Wiegand, Long, Gilbert & Hotchkiss*, no. 29,244; FIG. 3, achene, with beak and pappus, × 1, from TYPE; FIG. 4, achene, × 10, from TYPE. T. LATILOBUM DC.: FIG. 5, achene, × 10, from Old Port au Choix, Newfoundland, *Fernald, Long & Fogg*, no. 2159. T. TORNGATENSE Fern.: FIG. 6, leaf, × 1, from the TYPE, Head of Nachvak Bay, Labrador, *Woodworth*, no. 443; FIG. 7, head from TYPE; FIG. 8, achene, with comparatively short beak, and pappus, × 1, from TYPE; FIG. 9, achene, × 10, from TYPE.

BRANCHING POLYGONATUM PUBESCENS

M. L. FERNALD AND S. K. HARRIS

ON May 21, 1933, while returning from a field-trip in Vermont with a class of Radcliffe students, we stopped in the wooded area of Ashby in northern Middlesex County, Massachusetts to examine some shrubs which had caused discussion. Stepping from the automobile to the edge of the recently surfaced road we were surprised to find ourselves in a colony of liliaceous plants which, at first, were unrecognized. Examination showed that these were an aberrant form of the common Solomon's Seal of northeastern America, *Polygonatum pubescens* (Willd.) Pursh, with elongate, spreading or ascending leafy branches replacing the ordinary naked drooping peduncles. So far as we can